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MEMORANDUM FOR: Director of Central Intelligence  
THROUGH: Deputy Director/Intelligence  
SUBJECT: Primary Energy Production in the Sino-Soviet  
Bloc and the Free World

1. This memorandum is in response to your request for comparative data on the growth of primary energy production in the Sino-Soviet Bloc and the Free World.

~~2. Primary energy is the total resource used in the production of heat and power. It is derived principally from solid fuels, petroleum products, and falling water.~~  
~~It is an indication of economic development.~~

2. <sup>5</sup> During the next five years the Sino-Soviet Bloc plans a higher rate of growth in <sup>primary</sup> energy production than <sup>does</sup> the Free World. Bloc <sup>in the Bloc</sup> Energy production in 1955 equalled about 30 percent of <sup>production in</sup> the Free World ~~production~~. In 1960 it will increase to about ~~5~~ 40 percent. <sup>In spite of</sup> Despite this relative increase, however, the absolute gap between <sup>energy production in</sup> the Bloc and <sup>the</sup> Free

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World will not decrease. In fact the ~~Free World~~ primary energy production <sup>in the Free World by</sup> will increase 15,200 trillion <sup>British Thermal units</sup> (Btu) while Bloc production <sup>in the Bloc by only</sup> will increase 12,600 trillion Btu. Thus the gap will <sup>increase by</sup> grow about 5 percent.

3. <sup>Primary</sup> ~~Soviet Bloc~~ energy production <sup>in the Sino-Soviet Bloc</sup> is primarily dependent upon solid fuels while Free World energy production <sup>in the</sup> is primarily dependent upon petroleum products. As  ~~Bloc~~ production of petroleum <sup>in the Bloc</sup> increases, however, the importance of solid fuels <sup>to the</sup> ~~to the~~ Bloc <sup>will</sup> ~~is~~ declining <sup>slightly</sup>. By 1960, solid fuels are expected to supply only about 75 percent of total Bloc energy <sup>which is to be</sup> ~~production~~ compared with about 81 percent in 1955.

~~In 1960 petroleum products will account for 25 percent of total Bloc energy as compared with 18 percent today.~~

4. <sup>hydroelectric</sup> In 1955, hydro power contributed only <sup>0.5</sup> ~~one-half of one~~ percent <sup>of</sup> to total Sino-Soviet Bloc energy production <sup>in the</sup> and only 2 percent <sup>of total energy production in</sup> to the Free World total. These ratios will not change significantly by 1960.

5. <sup>produced</sup> Electricity from nuclear energy will not affect

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significantly the world <sup>production</sup> output of primary energy in 1960. In fact, in 1960, <sup>the military and "peaceful"</sup> nuclear energy programs of the US and <sup>the</sup> USSR will still use more electricity than will be generated by plants powered with nuclear fuel.

The USSR has announced that by 1960 it will have from 2,000,000 <sup>million</sup> to ~~2,500,000~~ <sup>million</sup> kilowatts <sup>(KW)</sup> of generating capacity, <sup>in plants powered with</sup> utilizing nuclear fuel. If completed, these power plants, could supply over <sup>6</sup> ~~six~~ percent of total Soviet <sup>production of</sup> electric power ~~output~~. Announced <sup>Plans</sup> by the US <sup>by the</sup> plans provide for a <sup>generating</sup> capacity of only 800,000 <sup>KW in plants powered with nuclear fuel</sup> kilowatts by 1960, which could supply about <sup>0.5</sup> ~~one half of one~~ percent of total US <sup>production of</sup> electric power <sup>as</sup> ~~output~~ forecast for 1960.

6/. The USSR, having produced 58 percent of the ~~Bloc's~~ <sup>primary</sup> total energy <sup>production in the Sino-Soviet Bloc</sup> output in 1955, will increase this share to 62 percent in 1960. Conversely, the US share <sup>total</sup> ~~in~~ <sup>of energy production in the</sup> the Free World output will <sup>decrease</sup> ~~drop~~ very slightly and will amount to about one-half of the Free World total in 1960.

7 8. The attached charts present the above data graphically. <sup>the</sup> The attached Table presents detailed data on the regional

production of primary energy, and the rates of production in the Sino-Soviet Bloc and in the Free World, by principal regions and categories, for selected years from 1940 through 1960.

OTTO E. GUTHE  
Assistant Director  
Research and Reports

Sino-Soviet Bloc

→ USSR

→ Solid fuels a/  
Crude oil and natural gas b/  
Hydroelectric power c/  
→ Total

European Satellites

same

Communist Asia

same

Sino-Soviet Bloc

same

Set table  
with totals below  
subdivisions  
+ grand totals (not percents)

Btu

10<sup>12</sup>